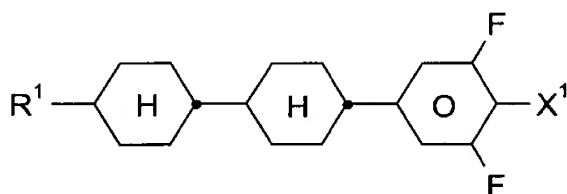


Patent Claims

Sub  
A<sub>1</sub> 1.

A liquid-crystalline medium of positive dielectric anisotropy, which comprises one or more compounds of the formula I



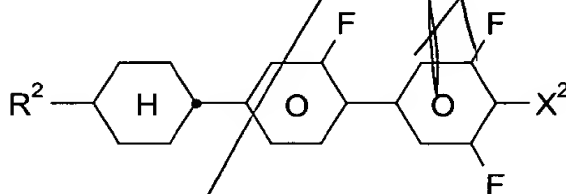
I

in which

$R^1$  is an alkyl or alkenyl radical having 1 or 2 to 7 carbon atoms respectively, and

$X^1$  is F,  $OCF_3$  or  $OCHF_2$ ;

one or more compounds of the formula II



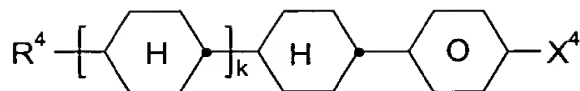
II

in which

$R^2$  is an alkyl or alkenyl radical having 1 or 2 to 7 carbon atoms respectively, and

$X^2$  is F,  $OCF_3$  or  $OCHF_2$ ; and

one or more compound(s) of the formula IV



IV

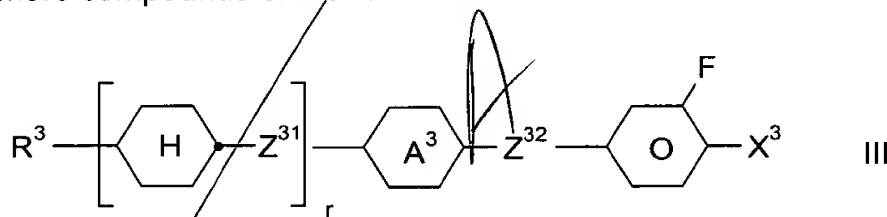
in which

$R^4$  is an alkyl or alkenyl radical having 1 or 2 to 7 carbon atoms respectively,

$X^4$  is F, Cl,  $\text{OCF}_3$  or  $\text{OCHF}_2$ , and

$k$  is 0 or 1.

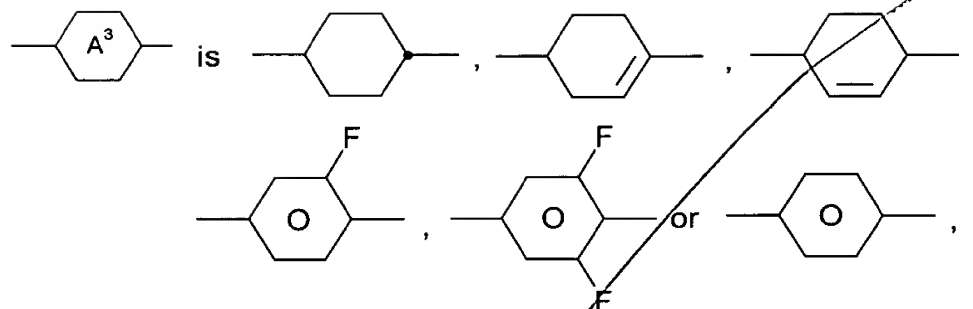
2. The medium according to Claim 1, which further comprises one or more compounds of the formula III



in which

$R^3$  is an alkyl or alkenyl radical having 1 or 2 to 7 carbon atoms respectively,

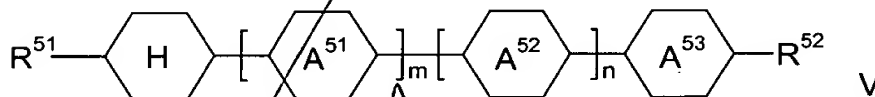
$Z^{32}$  and, if present,  $Z^{31}$  are each, independently of one another,  $-\text{CH}_2-\text{CH}_2-$ ,  $-\text{CH}=\text{CH}-$  or a single bond,



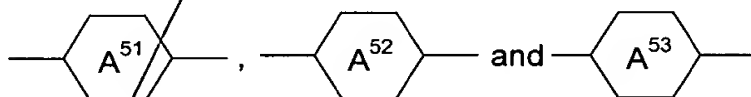
$X^3$  is F,  $OCF_3$  or  $OCHF_2$ , and

$r$  is 0 or 1.

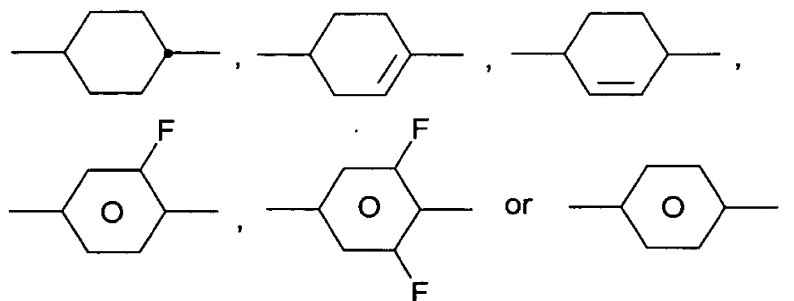
3. A medium according to Claim 1, which further comprises one or more compounds of the formula V



in which



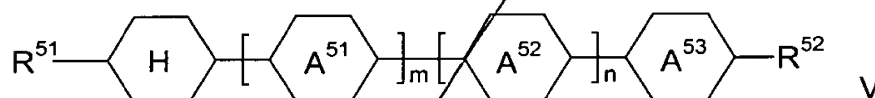
are each, independently of one another,



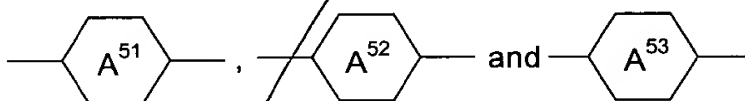
$R^{51}$  and  $R^{52}$  are each, independently of one another, an alkyl, alkoxy or alkenyl radical having 1 or 2 to 7 carbon atoms respectively, and

$n$  and  $m$  are each, independently of one another, 0 or 1.

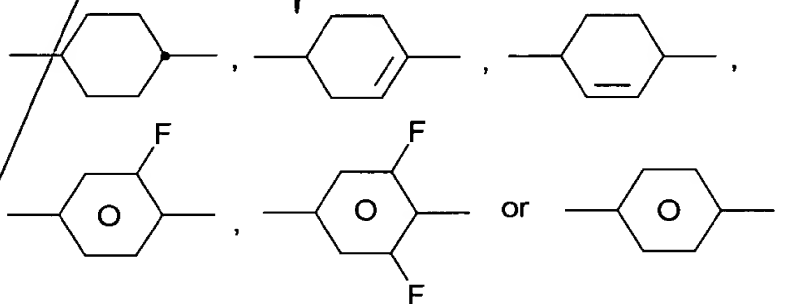
4. A medium according to Claim 2, which further comprises one or more compounds of the formula V



in which



are each, independently of one another,



$R^{51}$  and  $R^{52}$  are each, independently of one another, an alkyl, alkoxy or alkenyl radical having 1 or 2 to 7 carbon atoms respectively, and

$n$  and  $m$  are each, independently of one another, 0 or 1.

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5. A medium according to Claim 1, wherein the proportion of compounds of the formula I in the medium as a whole is at least 5% by weight.
  6. A medium according to Claim 4, wherein the proportion of compounds of the formulae II to V together in the medium as a whole is from 40% to 90% by weight.
  7. A multibottle liquid-crystal system which comprises a medium according to claim 1.
  8. An electro-optical device which comprises a liquid-crystalline medium of claim 1.
  9. A medium according to claim 4, which consists essentially of compounds of the formulae I to V.
  10. A medium according to claim 1, which exhibits a nematic phase at least down to  $-20^{\circ}\text{C}$  and at least above  $75^{\circ}\text{C}$ , a birefringence value of  $\leq 0.090$  or  $\geq 0.100$ , and a rotational viscosity,  $\gamma_1$  at  $20^{\circ}\text{C}$ , of  $160\text{mPa}\cdot\text{s}$ .
  11. A medium according to claim 4 which comprises a concentration of 3-65% compounds of the formula I, 3-40% of compounds of the formula II, 2-50% of compounds of the formula III, 10-50% of compounds of the formula IV and 0-30% of compounds of the formula V.  
*not optional*
  12. A medium according to claim 4, which comprises more than 50% of compounds of the formula I to V.
  13. A medium according to claim 4 which comprises more than 90% of compounds of the formula I to V.
  14. A medium according to claim 2, which consists essentially of compounds of the formula I to IV.

15. A medium according to claim 1, wherein, in formula IV,  $X^4$  is F or  $OCF_3$ .

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